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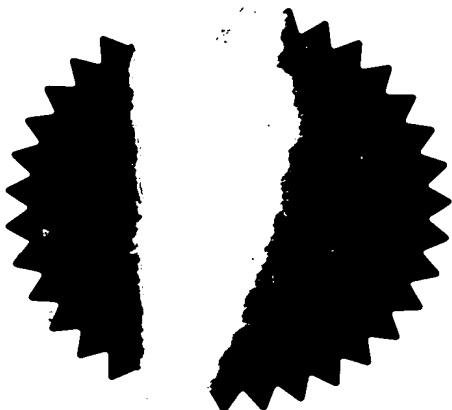
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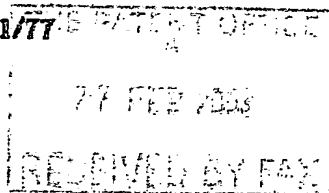
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Dated 25 February 2004

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The Patent Office

Cardiff Road
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1. Your reference

GW-G33540

2. Patent application number

(The Patent Office will fill in this part)

0304472.4

27FE503 E788325-1 000346

27/02/03 0.00 0304472.4

27 FEB 2003

3. Full name, address and postcode of the or of each applicant (underline all surnames)

Impressive Ideas Limited
29 Sydney Street
London
SW3 8PU

Patents ADP number (if you know it)

If the applicant is a corporate body, give the country/state of its incorporation

8575952001
England

4. Title of the invention

Remote Access System for Digital Data Storage Media

5. Name of your agent (if you have one)

"Address for service" in the United Kingdom to which all correspondence should be sent (including the postcode)

Bailey Walsh & Co
5 York Place
Leeds
LS1 2SD

Patents ADP number (if you know it)

224001

6. If you are declaring priority from one or more earlier patent applications, give the country and the date of filing of the or of each of these earlier applications and (if you know it) the or each application number

Country

Priority application number
(if you know it)Date of filing
(day / month / year)

7. If this application is divided or otherwise derived from an earlier UK application, give the number and the filing date of the earlier application

Number of earlier application

Date of filing
(day / month / year)

8. Is a statement of inventorship and of right to grant of a patent required in support of this request? (Answer 'Yes' if:

- a) any applicant named in part 3 is not an inventor, or
- b) there is an inventor who is not named as an applicant, or
- c) any named applicant is a corporate body.

See note (d))

Yes

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Continuation sheets of this form

Description 13

Claim(s)

Abstract

Drawing(s)

DMC
1 only

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Priority documents

Translations of priority documents

Statement of inventorship and right to grant of a patent (Patents Form 7/77)

Request for preliminary examination and search (Patents Form 9/77)

Request for substantive examination (Patents Form 10/77)

Any other documents (please specify)

11.

I/We request the grant of a patent on the basis of this application.

Signature

Date

Ben

27.02.03

12. Name and daytime telephone number of person to contact in the United Kingdom

A Tomkinson
0113 243 3824

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Remote Access System For Digital Data Storage Media

The invention to which this application relates is to a remote access system to allow access to a specified area or a quantity of data stored on a recording medium. In particular, although not necessarily exclusively, the invention relates to the provision of data on a recording medium in the form of a disc and, yet further, and again although not exclusively, recording medium in the form of a digital video disc (DVD).

The invention will now be described with reference to a DVD and apparatus for creating video and sound images from the same, but it should be appreciated that the concept herein described, can be applied to other recording media and the scope of this application extends, and should be interpreted as so doing, to other recording media.

Conventionally, the DVD includes a series of data storage areas or groups, hereinafter referred to as areas, identified by identification tags. The data is stored in a digital format on the DVD.

Typically, when the DVD is inserted into a suitable apparatus for reading the data from the DVD and, using that data, video and audio are generated typically via a television set incorporating a display screen and speakers connected to the apparatus.

Normally, upon insertion of the DVD into the said apparatus, the disc is read by the apparatus and a menu displayed on screen. The menu typically includes a series of user selectable options, and each option on the display screen can relate to a particular area of data on the DVD identified by the data facts. Thus, each title in the menu, is linked to one or a number of

data areas of a DVD. The user can then select the title from the menu as they wish, typically via a remote control device which includes a series of keys, which act as directional keys which, when depressed by the user, cause a cursor or highlight to move around the display screen and hence around the menu options. When the desired option on the menu is located, the user can select that particular option by pressing the appropriate key on the remote control. Upon selection, the area of data represented by the selected option, is identified on the DVD, the data in that area accessed and video and/or audio reproduced from the said identified area of data as appropriate.

There are various formats of remote control device operation and this particular invention can be used with any format.

The most common format is an infrared system whereby a stream of data generated as a result of the depression of a key or sequence of keys, causes a sequence of data signals to be transmitted via infrared transmitter and received at the DVD apparatus by a receiver and then processed accordingly.

A problem with known DVD apparatus is that all of the data that is provided on the DVD is typically, but not always, displayed on the menu of the initial display generated on screen. Thus, once the menu has been viewed a first time, on subsequent use of the DVD, there is no element of surprise and the user, can become bored with the data offered by the DVD relatively quickly, which means that the DVD is not used, revisited and/or reused as often as perhaps it could be. Furthermore, due to the nature of the DVD and the areas of the data thereon, DVD's which are provided for commercial use in particular, allow uniform access to all of the areas of data on the DVD.

The aim of the present invention is to provide an improved and new feature to usage of the DVD and the DVD apparatus which allows selective and quick access to hidden content on the DVD that is not evident when the DVD is used normally and is not accessible by any evident means and is only accessible by means of the invention. A further aim of the inventive is to allow selective operation and access to areas of data in the DVD through actuation of a control device, accessory or part of another product, toy or plaything.

In a first aspect of the invention there is provided a system for the generation of video and/or audio from digital data, said system including a storage medium for the storage of digital data thereon, said data stored in identified areas thereon, said storage medium placed in processing apparatus connected to a video display screen and/or speakers and, said data, when accessed and processed via the apparatus, is used to generate video and/or audio via the display screen and/or speakers and wherein at least one of the areas of data is accessible via the transmission of a signal which is predesignated and specified for that area of data from a location remote to the apparatus and, said apparatus, upon receiving the signal, locates the identified area of data on the recording media accesses the same and processes the data to generate video and/or audio.

Typically the data storage medium is a disc, and more typically a DVD.

This invention is differentiated from conventional access systems by the fact that in the conventional system, the user is required to interact with the display screen which displays the normally available area of data in the form of title options and/or in line options and, in the conventional system, rather than a specified signal being transmitted which is specific to the

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particular area of data, a signal is sent which either moves a cursor onto a displayed option or is a signal to indicate that the option should be selected, i.e. the signals sent is not actually indicative of any particular option. Conventionally, when the signal is sent from the remote control once a particular option title is identified, the apparatus then identifies the particular area of data from the selected option and then accesses the area of data. In contrast, in the current invention, the specified stored signal is provided from the remote control system to the apparatus and allows immediate selection of the area of data identified directly by the signal, not via a display screen menu and so, firstly, the said area of data need not be shown as being available on any menu display and secondly, to gain access to the area of data there is no requirement for interaction with a menu display.

In one use of the invention the particular area of data which is accessed via the transmission of the signal is linked to the means by which the signal is generated so as, for example, to give direct access to specific information which can be related to the means used for input.

In one embodiment, the device used for the transmission of the specific stored signal, is a remote control device having a specific or number of keys provided thereon for selective depression by a user, and wherein the depression of one or a sequence of said keys by the user, causes the specified signal to be generated and transmitted to the apparatus to allow access to at least one area of data on the disc.

In a preferred option, the remote control device incorporates one particular key which is identified as being the key which, when depressed, causes the specified stored signal to be transmitted.

In another embodiment, the specified stored signal is held in a memory connected to an actuation means and the actuation means and memory are, in turn, located in an article such that activation of the actuation means causes the transmission of the specific stored signal. In one embodiment, the actuation means can be provided as part of a product such as, for example, a toy or plaything or an accessory related by theme if required to the remote.

The signal can be transmitted by any suitable system such as, for example, RF, Passive resistance, Infra red, bar code or any other suitable data system.

In one embodiment, the actuation means and specified signal, can be provided in isolation in that no other signals can be transmitted from the said article or alternatively, can be provided as part of further actuation means adjacent or at a spaced location on said article.

In one embodiment, the actuation means can be, for example, a voice activation or may be by an electrical activation or a mechanical activation system.

In any embodiment, once the signal has been transmitted and received by the apparatus in which the disc is located, the area or areas of data on said disc represented by said signal are accessed and video and/or audio from said data displayed via a display screen and/or speakers. Once displayed, the user may further interact with the disc storage media as required in a conventional manner or by using the dedicated remote facility.

The present invention therefore provides a system for allowing conditional access to at least one area of data on a disc storage

media thereby providing, if required, the opportunity to allow public access to certain areas of data on the disc and conditional access to further areas of data thus providing a security feature, and/or making all the data on the disc only accessible upon receipt of the specific signal and/or, providing the opportunity for the data stored on the disc to be accessed in a surprising and/or themed manner which is particularly attractive to children.

It is envisaged that the invention is of particular use in relation to a DVD format of data storage.

Depending on the security requirement of the utilisation of the invention, the specific signal can comprise a selected number of data bits such that for example, a specified signal for a toy, may include only a relatively small number of data bits such as, for example, 2 to 5 as there are no real security concerns and it is only the function of the invention that is required to be performed. However, where there are security concerns and the invention is provided to provide additional security for certain areas of data so as to allow conditional access, the specified signal may incorporate a large number of data bits such as for example up to 20, and/or the specified signal may be changed from time to time so as to prevent attempts to "hack" into the specified signal to gain unauthorised access to the areas of data.

Typically, once the area or areas of data have been accessed via the transmission of the signal, the portions of data are then unlocked and can then respond to normal remote control signals if that is desired.

Typically, if the disc is removed from the apparatus and subsequently reinserted, the conditional access areas of data will

not be accessible until the specified signal is again transmitted to the apparatus.

In a further aspect of the invention, the number of times which the conditional areas of data can be accessed can be predetermined and range, for example, from one access only, through to a number of times, or a number of times in a selected time period and the like.

Thus in accordance with the invention, there is provided the ability to allow conditional access to a certain area or areas of data on the DVD. The conditional access can be provided for security purposes such that for example, a DVD includes data areas which are publicly accessible and data areas which can only be accessed by authorised personnel, or can be provided for added entertainment and/or functionality. Yet further it can be provided to provide a DVD in which all the of the data is only accessible in a conditional manner as herein described.

The authorised person can be provided with a remote control device which differs from that provided to unauthorised persons inasmuch that the remote control device includes at least one key which, when depressed, allows generation of a particular specific stored signal to be transmitted to the DVD apparatus. Upon receipt of the signal, the DVD apparatus identifies the particular area or areas of data on the DVD and, having identified the same, accesses the data and allows the same to be viewed via the display screen and/or listened to via the speakers. Those users without the specific key or keys or without a specific key press sequence knowledge, are unable to access that particular area of data as they are unable to generate and indeed are unaware of the specific signal which is required to be generated to access the further data areas.

Specific embodiment of the invention will now be described with reference to the accompanying drawings, wherein:-

Figure 1 illustrates a first indication of apparatus in accordance with the invention;

Figure 2 illustrates a second embodiment of the apparatus in accordance with the invention.

The invention of this application is envisaged to be used in relation with conventional apparatus for the playing and generating of video and/or audio from a DVD. Such apparatus is indicated by reference numeral 2 in Figures 1 and 2. The DVD apparatus is typically connected to allow the transfer of video and/or audio to a television set 4 or other display means which typically incorporate a display screen 6 and speakers 8 although it will be readily appreciated that the speakers and display screen can be provided separately to one another although in connection therewith.

In normal operation, when the DVD is inserted into the apparatus, the apparatus 2 is activated and this can cause the generation of a menu on the display screen 6 or alternatively the generation of video and/or audio from the data on the DVD can simply commence automatically.

An example of a conventional menu display is illustrated in Figure 1 and this comprises, in this case, a series of options 10, each of which relates to a particular area of data, and a series of options 12 which relate to the language in which the audio can be generated. In use, the user can utilise the remote control device 14 which generates, in this embodiment, an infrared

signal 16 via a transmitter in the remote control device and which signal is received via a receiver 18 in the DVD apparatus.

The remote control device is provided with a series of keys 20 which can be selectively depressed by the user. The depression of a particular key or a particular sequence of keys, causes a signal to be emitted and the generation of a particular action on the display screen. For example, the remote control device 14 includes a series of directional keys 22 which, when depressed, cause a highlight portion, indicated by broken lines 24, on the screen 6, to move around the screen options in the same direction as indicated by the directional keys 22 on the remote control device. By this means, the highlight portion 24 can be moved onto a preferred option and when the preferred option is reached, a further key, typically known as the select key, on the remote control, can be depressed and a signal generated and transmitted to the DVD apparatus to cause that particular option to be selected and the video and/or audio resulting from that selection to be generated on the display screen and via the speakers by the apparatus accessing the appropriate data stored on the DVD. Thus, in this case, the signal which is transmitted from the remote control device is not specific to the particular area of data but rather specifies the selection of the option which via the display screen, typically by the apparatus finding the appropriate data tag on the DVD related to the displayed option such that the particular area of data matches the selected option. When identified, the particular area of data is accessed and used to generate video and/or audio.

The functions described herein can be performed conventionally by the user in conjunction with the DVD apparatus remote control device and screen and so each user of the DVD has equal access to the areas of data on the DVD.

In accordance with the present invention, there is provided, with reference to Figure 1, the ability to allow conditional access to a certain area or areas of data on the DVD. The conditional access can be provided for security purposes such that for example, a DVD includes data areas which are publicly accessible and data areas which can only be accessed by authorised personnel. The authorised personnel can be provided with a remote control device which differs from that provided to unauthorised personnel inasmuch that the remote control device includes at least one key which, when depressed, allows generation of a particular specific stored signal to be transmitted to the DVD apparatus 2. Upon receipt of the signal, the DVD apparatus identifies a particular area or areas of data on the DVD and, having identified the same, accesses the data and allows the same to be viewed via the display screen and/or listened to via the speakers. Those users without the specific key or keys on the remote control device are unable to access that particular area of data as they are unable to generate and indeed are unaware of the specific stored signal which is required to be generated to access the further data areas.

In an alternative embodiment, all users may have a common remote control device but only certain users are informed of a particular key depression sequence which, when performed, allows the generation of a specific stored signal to the DVD apparatus and, upon receipt of the same, the DVD apparatus again allows access to the particular restricted access areas of data. Dependant upon the level of security required, the specified stored signal generated and transmitted can comprise a number of commands, with the number of commands used selected to provide a required security level i.e. the higher the number of commands the higher the level of security as the increased number of commands makes it more difficult for

unauthorised persons to attempt to recreate the code and gain access to the data areas.

In a further feature of the invention, and regardless of the particular embodiment of the same, there may be a need to input data into the remote control device or system, from which the specific stored signal can be accessed and transmitted to the DVD apparatus via the remote control device or system.

In one embodiment a series of data carrying cards with credit card type magnetic strips on the same can be provided for selective insertion into the remote control device and/or connection to the remote control service. In this case the data can also be input via a card reader which reads the data from the card and sends a coded series of signals from the remote device, thus accessing a dedicated part or data area of the disc. For example, the reader and remote device package could include a DVD containing biographies on a range of characters for the reception of separately sold collector cards which carry the specific signal code which is specific for the particular type of card and when a card is put in the reader it opens the character specific bio that would otherwise be inaccessible. The input of the code can be done with magnetic strips as above, or the cards can be moulded with a set of pins that correspond with keys on the remote, or a bar code reader can be used. It will therefore be appreciated that the means of accessing the code is not critical, rather it is the fact that the remote control device or system can be programmed to allow the generation of specific stored signal or signals to access on a conditional basis areas of data from the recording media.

In a further embodiment of the invention, as illustrated in Figure 2, the invention can be utilised in conjunction with a toy or plaything and in this embodiment, security is not the concern

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but rather the invention is provided to allow added value to be provided to a toy or plaything and also to provide added enjoyment to the child playing with the toy and allow interaction with the said toy.

In this embodiment, when the toy or plaything is purchased, the same includes a DVD. The DVD can be placed into the apparatus 2 and, upon placement, a menu may be generated on screen or alternatively, no further action will be immediately required. If a menu is displayed, then the user can select a particular option which will allow the generation of, for example, a scene and/or noises via a display screen and speakers. Typically the scene depicted is in some way linked and relevant to another article or articles 30 which are part of the toy or plaything and can be themed to be relevant to the content of the DVD. Alternatively, no display is generated and the DVD is retained in position in the apparatus 2 with the display screen and speakers switched on. In this embodiment, the article or articles 30 are provided with actuation means 32, in this case in the form of a gun on the car and, when actuated, typically by mechanical actuation or voice activation, the activation means cause the generation of specific signal 34 from a transmitter provided in the article 30. The signal 34, when received by the apparatus 2, causes the identification of a particular area of data on the DVD and the accessing of the same which, causes the display on screen or via the speakers of video and/or audio generated from the accessed data. The video and/or audio is typically linked to the operation undertaken by the child via the actuation means 32 and/or the toy article generally. For example, if the actuation means are in the form of a gun, the activation is caused by the firing of the gun by the child which may cause, for example, an explosion to be generated on the display screen 6 and the sound of an explosion via the speakers 8.

In addition to the obvious advantages as described, further advantages are that the transmission of the specific stored signal can be generated via a conventional remote control device as the remote control device is required to be able to transmit a signal which can be recognised by the DVD apparatus, and in turn the DVD, such that the DVD itself can be configured to recognise the particular signal and, upon receiving the particular signal, allows access to a particular area of data on the DVD. Thus, the DVD apparatus itself does not need to be modified as the receipt of the signal accesses commands which are implanted on the DVD itself.

